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ABSTRACT

The relationships of perceived participation in decision-making, communication variables, and employment and employee job satisfaction were examined. A survey was conducted with 103 classified employees (clerks, secretaries, and the lowest level supervisors) in three administrative units at a comprehensive, eastern university. Employees were asked to supply the following demographic and employment information: office; years of service at the institution; age; and current yearly salary. The remainder of the questionnaire consisted of scales measuring: communication satisfaction with supervisor; supervisor receptivity to information; decision participation level; participation/desired participation discrepancy; and job satisfaction in relation to supervisor, coworkers, promotion, pay, and work. Scales included: the Interpersonal Communication Satisfaction Inventory (Hecht, 1978), items from PORGI Scales (Hurt and Teigen, 1977) and Management Communication Style Instrument (Richmond & McCroskey, 1979), and the Job Descriptive Index (Smith, et al., 1969). The results of canonical correlation and measurement precision equating analyses demonstrated that job satisfaction was most strongly and positively related to communication satisfaction with supervisor and supervisor's receptivity to information. Implications for personnel decisions and training, productivity, and the possible nonproductive value of initiating a participative program of decision-making for nonprofessional employees are discussed. A bibliography is appended. (SW)

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AN ANALYSIS OF THE CONTRIBUTION OF PARTICIPATIVE DECISION-MAKING AND COMMUNICATION WITH SUPERVISOR AS PREDICTORS OF JOB SATISFACTION

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Abstract

This study examined the relationships of perceived participation in decision-making, communication variables, employment variables, and employee job satisfaction. Classified employees in three administrative units at a comprehensive Eastern university served as subjects. Results of canonical correlation and measurement precision equating analyses demonstrated that job satisfaction was most strongly and positively related to communication satisfaction with supervisor and supervisor's receptivity to information. Implications are discussed in reference to personnel decisions and training, productivity, and the possible nonproductive value of initiating a participative program of decision-making for non-professional employees.

Paper presented to the
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THE ASSOCIATION FOR INSTITUTIONAL RESEARCH

This paper was presented at the Twenty-Second Annual Forum of the Association for Institutional Research held at the Denver Hilton Hotel in Denver, Colorado, May 16-19, 1982. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum papers.

D. R. Coleman, Chairman
Forum Publication
Advisory Committee

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Abstract

This study examined the relationships of perceived participation in decision-making, communication variables, employment variables, and employee job satisfaction. Classified employees in three administrative units at a comprehensive Eastern university served as subjects. Results of canonical correlation and measurement precision equating analyses demonstrated that job satisfaction was most strongly and positively related to communication satisfaction with supervisor and supervisor's receptivity to information. Implications are discussed in reference to personnel decisions and training, productivity, and the possible nonproductive value of initiating a participative program of decision-making for non-professional employees.

AN ANALYSIS OF THE CONTRIBUTION OF PARTICIPATIVE DECISION-MAKING AND COMMUNICATION WITH SUPERVISOR AS PREDICTORS OF JOB SATISFACTION

The economic situation in the United States has made it increasingly difficult for colleges and universities to retain high quality faculty and staff. The rate of inflation has far exceeded salary increases thus, eroding the buying power of wages paid to university employees (Howard, Skarpness, Zierke, & McLaughlin, 1982). In addition, faculty, administrators, and staff face increased work demands because of hiring freezes, retrenchment, and academic and administrative changes; all of which result in decreased productivity, increased turnover, absenteeism, complaints and grievances, and burnout. According to Freudenberger (1982), 20% of the population suffer from burnout and estimates of the results of burnout range from fatigue and absence to dissatisfaction and depression (Katz, 1982).

While few colleges and universities have direct control over all budgetary decisions which could affect such adverse employee problems, administrators are becoming increasingly more aware of how business and industrial organizations examine such problems. One significant variable found to contribute to decreasing some of these problems is employee job satisfaction.

Researchers report that a number of variables contribute to increased job satisfaction (i.e., need fulfillment, achievement, promotion frequency, jobs that are mentally challenging, obtained pay which is close to valued pay, verbal recognition, adequate working conditions, increased education, and a higher position in the organization). Participative decision-making, a recent innovation in management theory, has been used in numerous organizations as a means to increase satisfaction, and ultimately achieve greater goal attainment. Participative decision-making can be identified along a continuum reflecting the different access that organization members have to actual decision-making and the amount their influence affects a given decision outcome (Dachler & Wilpert, 1978).

Some research supports a causal hypothesis between participation and job satisfaction, the majority of the evidence provides correlational data to demonstrate the association. While some researchers acknowledge the contributing factor of participation to job satisfaction, others cite more significant contributors such as individual employment characteristics of age, salary, and level of position within the organization, and communication with supervisor. The frequency and quality of interactions between subordinate and supervisor have been found to be significantly related to increased job satisfaction.

A limited amount of research has attempted to examine contributing factors of job satisfaction for employees in the education field. While researchers such as Miskel, Fevurly, and Stewart (1978), Solomon and Tierney (1977), and Schmidt (1976) report that participative organizational processes, recognition, level of position, and rewarding interpersonal interactions contribute to increased satisfaction among administrators, little attention has been paid to the non-professional staff in educational organizations. These people are generally those who do not often move to change jobs, are community and state-bound, and are less able to supplement their incomes with outside work. The purpose of this study was to examine the relationships among perceived participation in decision-making, communication-related variables, employment variables, and variables reflecting employee job satisfaction among university non-professional employees.

JOB SATISFACTION, COMMUNICATION, & PARTICIPATION IN DECISION-MAKING

Job satisfaction is generally defined as one's response (affect) to various facets of the work environment. Perspectives on job satisfaction have been grounded in several theoretical approaches including need fulfillment (Schaffer, 1953), discrepancy theory (Locke, 1969), equity theory (Adams, 1963), and Herzberg's Two-Factor Theory (Herzberg, Mausner, & Snyderman, 1959). The most widely accepted conceptualization of job satisfaction is that of Smith, Kendall, and Hulin (1969) who identify dimensions of satisfaction with supervisor, pay, work, co-workers, and promotion. The most closely examined of these dimensions

is satisfaction with supervisor, and the establishment of interpersonal relationships among employees has been identified as the second most important contributor to effective management (Campbell, Dunnette, Lawler, & Weick, 1970), all of which emphasize the importance of the study of communication-related variables as contributors to job satisfaction.

Studies examining communication and job satisfaction emphasize the importance of the employee's satisfaction with communication with supervisor (Falcione, McCroskey, & Daly, 1977; Richmond & McCroskey, 1979). This dimension of general job satisfaction, which is concerned with "asks my advice", "is tactful", "tells me where I stand", etc., is similar to Hecht's (1978) definition of interpersonal communication satisfaction -- "a discriminative fulfillment approach . . . with the expectation of positive consequences" (p. 254). Satisfaction with interactions with supervisor can be classified as a communication-related variable that may significantly contribute to job satisfaction.

Closely related to communication satisfaction is the supervisor's receptivity to communication from subordinates (Falcione, 1974a). The conceptualization of receptivity is similar to the management concept of consideration, defined as the degree to which the supervisor shows understanding and concern (Stogdill & Coons, 1957), and maintenance of relationships (Fiedler, 1966). The supervisor's receptiveness to information, ideas, and problems of the employee provides an empathic sense of caring and concern, important factors in the human-relations approach to understanding job satisfaction.

Participation in decision-making has also received considerable attention as a predictor of employee job satisfaction. Lewin, Lippitt, and White's (1939) work with democratic and laissez-faire types of leaders, and Tannenbaum and Schmidt's (1958) seven-point continuum from managerial autonomy to group decision-making emphasize the possible effects of allowing subordinates some say in the making of decisions. Investigations of the relationship of participation and employee job satisfaction have produced conflicting results. Early research (Coch & French, 1948; Morse & Reimer, 1956; French, Israel, & As, 1960; Lawler &

Hackman, 1969) demonstrate only partial support for a positive relationship between participation and job satisfaction, but later research findings show a significant relationship (Falcione, 1974a; Falcione, 1974b; Hurt & Teigen, 1977; Falcione, et al., 1977; Harrison, 1981).

One theoretical and operational perspective of participation is that it is a communication strategy with behavior of the supervisor as the referent to participation. Richmond and McCroskey (1979) demonstrate that employees who see their supervisor's communication and management style as more participative (consults or joins) are more satisfied than employees who see their supervisor's style as non-participative (tells or sells). From these and the above conclusions, it was hypothesized that:

H_1: A linear composite of communication-with-supervisor variables and decision participation variables is significantly related to a linear composite of employee job satisfaction variables.

Further, one aspect which has not been clearly established is the different contributions that communication-with-supervisor and participation in decision-making have to job satisfaction. The above literature supports the finding that high quality communication with supervisor is a significant predictor of job satisfaction. Mere participation in the decision-making process, on the other hand, may not always predict positive job satisfaction. For example, Lischeron and Wall (1975) found that employees did not always want more participation, and Wadia (1980) reported that (1) when employees cast a minority vote, or (2) when participation in making the decision was not viewed as positive by employees, then dissatisfaction increased. Thus, while participation may at times be a positive contributor to employee job satisfaction, there are times when it may produce different results. Similarly, because university salaries are governed more by legislative and administrative decisions, the employment variables associated with salary are not the major contributors to job satisfaction. Therefore, the following hypothesis was proposed:

H_2: The correlation between a linear composite of communication-

with-supervisor variables and a linear composite of job satisfaction variables (a) is greater than the correlation between a linear composite of decision participation variables and a linear composite of job satisfaction variables, and (b) is greater than the correlation between a linear composite of employment variables (age, years of service, and salary) and a linear composite of job satisfaction variables.

To further examine the relative contributions of individual variables and combination of variables, the following research question was posited:

R_1: What are the relationships among all the variables in the study in regard to direction and magnitude?

METHOD

Sample & Procedures

This study surveyed 158 classified employees (secretaries, clerks, lowest level supervisors, etc.) at a comprehensive Eastern university. The personnel were employed in the Admissions & Records Office (N=49), the Controller's Office (N=94), and the Personnel Office (N=15). Directors of each office granted prior authorization for the survey. Characteristics of these employees were as follows: average age = 34, average salary = $11,720, and average years of service = 5. Of the 158 questionnaires (see below for description) mailed to employees at their offices, a total of 103, an overall average return rate of 65%, were returned after reminder notices were sent. Some data on the collected questionnaires were incomplete, resulting in a sample n of 97.

Questionnaire & Measurement

The questionnaire consisted of seven pages of instructions, questions, and scales. Identification of the employee was not asked for and anonymity was assured. Employees were asked to supply the following demographic and employment information: office; years of service at the institution; age; and current

yearly salary. These data were used as employment variables and to check for adequacy and representativeness of the return sample.[1] The remainder of the questionnaire consisted of scales measuring the other variables under study: (1) Communication Satisfaction with Supervisor; (2) Supervisor Receptivity to Information; (3) Decision Participation Level; (4) Participation/Desired Participation Discrepancy; and (5) Job Satisfaction on five dimensions -- satisfaction with supervisor, co-workers, promotion, pay, and work. All of these scales were analyzed with item-total correlations using $r \geq .50$ as the criterion for including scale items. Reliabilities for each scale were then computed to determine interna consistency (Nunnally, 1967).

Communication Satisfaction with Supervisor was measured with a modified form of the 16-item version of the Interpersonal Communication Satisfaction Inventory (Hecht, 1978). Hecht's original Likert-type items were reworded to reflect communication with a supervisor rather than simply another person. The modified version assessed employees' communication satisfaction in regard to conversations with their supervisors. Likert-type anchors (Strongly Agree to Strongly Disagree) were used for the seven-step response format. Hecht's 16-item, single-factor inventory has produced previous reliabilities ranging from .84 to .97 and validity coefficients ranging from .66 to .86 (Hecht, 1978). The total score for Communication Satisfaction with Supervisor correlated at .50 or above with 14 of the 16 items used. Two items failed to meet the criterion and were excluded from the final further analyses. Internal reliability for the resulting 14-item scale was .94.

Supervisor Receptivity to Information was measured with a 22-item scale constructed specifically for this study.[2] Six items were developed from Hurt and Teigen's PORGI Scales (1977) because of the similarity of the innovativeness construct. The Likert-type items used a seven-step response format with anchors on a Strongly Agree to Strongly Disagree continuum. The items were designed to assess the employee's perceptions of the supervisor's receptivity to ideas and information from employees. The Supervisor Receptivity to Information total

correlated at .50 or above with 21 of the 22 items used. One failed to meet the criterion and was excluded from further analyses. Internal reliability for the resulting 21-item scale was .96.

Decision Participation Level was measured with the Management Communication Style Instrument (Richmond & McCroskey, 1979), condensed and simplified in order to be comprehensible to the sample without oral instructions. This instrument provided brief descriptions of four styles of management reflecting allowed participation in decision-making. The scales used a 19-point continuum ranging from Tell (10), through Sell (16), through Consult (22), to Join (28). Subjects were asked to circle a point on the continuum representing the style of management of their supervisor.

Participation/Desired Participation Discrepancy was measured as a discrepancy score between perceived decision participation level and preferred participation level. On the Management Communication Style Instrument, subjects also circled the management style under which they would prefer to work. This score was then subtracted from their actual supervisor style (described above as Decision Participation Level) score. The absolute difference between these two scores (ignoring sign) was used as the measure of the Participation/Desired Participation Discrepancy. Although test-retest reliabilities for this measure and the preceding one were not feasible for this study, previously obtained reliabilities for Management Communication Style have been fairly high ranging from .85 to .87 (Richmond & McCroskey, 1979; Richmond, McCroskey, Davis, & Koontz, 1980).

Job Satisfaction was measured with a modified version of the Job Descriptive Index (JDI) developed by Smith, et al. (1969). This multiple factor instrument measures five dimensions of job satisfaction with (1) supervision; (2) work; (3) pay; (4) promotion; and (5) co-workers. The original JDI used a three-point (Yes, ?, No) response format for 72 adjectives and phrases (e.g., boring, dead-end job, lazy, etc.) on the five dimensions of satisfaction. In this study, the adjectives/phrases were converted to Likert-type statements (sentences) and used a seven-point response format (Strongly Agree to Strongly Disagree). This

format made the JDI equivalent to other measures used in the questionnaire and increased precision of measurement. Furthermore, based on previous research (Smith, et al., 1969; Falcione, et al., 1977; Hurt & Teigen, 1977; Richmond & McCroskey, 1979), the 6 highest loaded items of the 5 factors were selected for use in this study and the items were randomly ordered to off-set response bias. Reliabilities observed in the previously cited research have ranged from .73 to .92 on the five dimensions. Job Satisfaction items all correlated with respective totals for each job satisfaction dimension at .50 or higher. Reliabilities for this study by index/dimension were as follows: satisfaction with supervisor = .35; satisfaction with co-workers = .76; satisfaction with pay = .82; satisfaction with promotion = .79; satisfaction with work = .82.

Data Analysis

The first hypothesis was tested with canonical correlation. Communication Satisfaction with Supervisor, Supervisor Receptivity to Information, Participation Level, and Participation/Desired Participation Discrepancy served as "predictor" variables. The five dimensions of job satisfaction were the "criterion" variables The second hypothesis was tested with t-ratios (see Ferguson, 1971) between three canonical correlation coefficients: one canonical correlation used Communication Satisfaction with Supervisor and Supervisor Receptivity to Information as "predictors"; the second canonical correlation used Participation Level and Participation/Desired Participation Discrepancy as "predictors"; and the third canonical correlation used years of service, age, and salary as "predictors". The five dimensions of job satisfaction were the "criterion" variables for all three canonical correlations. The research question was analyzed with Pearson Product-Moment Correlations in order to determine the direction and magnitude of relationships among all paired variables. The .05 level of significance was required for all statistical tests.

RESULTS AND INTERPRETATION

First Hypothesis

The canonical correlation between the "predictor" variables and the

"criterion" variables was significant (F=8.53, d.f.=20/293, p<.0001; see Table 1). The linear composite of (1) Communication Satisfaction with Supervisor; (2) Supervisor Receptivity to Information; (3) Decision Participation; and (4) Participation Discrepancy was significantly correlated (R_c=.87) with a linear composite of Job Satisfaction with (1) supervisor; (2) co-workers; (3) pay; (4) promotion; and (5) work. The first hypothesis was confirmed. The communication-with-supervisor/participation composite had 76% shared variance with the job satisfaction composite. Although, causality could not be inferred in this study, job satisfaction appeared to be highly associated with the perceived supervisor's communication with subordinates and participation allowed. Communication Satisfaction with Supervisor and Supervisor Receptivity to Information were the dominant contributors to the "predictor" composite (see r's in Table 1). Satisfaction with supervisor and work were the predominant contributors to the job satisfaction composite (see Table 1). The strength of the relationship among these variables is further supported by the correlation matrix (Table 3).

Second Hypothesis

The second hypothesis was also supported. Three canonical correlation models were developed in order to provide R_c's used in the test of the hypothesis (see Table 2). In the first subhypothesis (a), the canonical correlation (R_c=.87) between communication-with-supervisor variables and job satisfaction variables was significantly greater (t=6.65, d.f.=94, p<.0005) than the canonical correlation (R_c=.59) between decision participation variables and job satisfaction variables. Likewise, in the second subhypothesis (b), the canonical correlation (R_c=.87) between communication-with-supervisor variables and job satisfaction was significantly greater (t=16.17, d.f.=94, p<.0001) than the canonical correlation (R_c=.47) between employment variables (age, years of service, and salary) and job satisfaction variables.

In the canonical correlation involving communication-with-supervisor and job satisfaction, both Communication Satisfaction with Supervisor and Supervisor Receptivity were highly associated with their composite (see r's in Table 2)

Satisfaction with supervisor and work were most highly associated with the job satisfaction composite. There was 76% shared variance between composites of communication-with-supervisor and job satisfaction.

In the canonical correlation involving decision participation and job satisfaction, both "predictors" (participation level and the participation/desired participation discrepancy) were highly associated with the participation composite (see r's in Table 2). Again, Job Satisfaction with supervisor and work were most highly associated with the job satisfaction composite. However, there was significantly less shared variance (35%) between composites of participation and job satisfaction than in the previous correlation between communication-with-supervisor and job satisfaction (76%). In the canonical correlation involving employment variables (age, years of service, and salary) and job satisfaction, the three employment variables were fairly highly associated with their composite (see r's in Table 2). Salary was the dominant contributor to this variate. Unlike previous job satisfaction composites, however, satisfaction with pay and work were most highly associated with this job satisfaction variate. Nevertheless, there was still significantly less shared variance (22%) between composites of employment variables and job satisfaction than in the correlation between communication-with-supervisor and job satisfaction (76%). Differences in variables loaded on the job satisfaction component indicate that employment variables and communication-with-supervisor variables are related to different aspects of job satisfaction (see Table 2).

Post Hoc Validity Analysis

Although communication-with-supervisor variables accounted for significantly (and meaningfully) more variance in job satisfaction than did participation variables, or employment variables, these differences might possibly have been due to differences in precision of measurement. Therefore, the communication-with-supervisor variables were converted to have lower levels of measurement precision similar to other scales, Communication Satisfaction (17 point scale) and Receptivity (18 point scale). Then, scores on the converted scale were

entered again into canonical correlation with the job satisfaction variables. Again, the R_c was .87 accounting for 76% of variance, and the association of variables with composites were comparable. Possible differences in precision of measurement apparently did not produce artifactual differences among the canonical correlations used in the test of the second hypothesis.

Research Question

Pearson Product-Moment Correlations were used first to analyze the research question and to determine if the data were appropriate for canonical correlation. The correlation matrix (see Table 3) revealed that many of the correlations among variables in the study were significant, $p < .05$. Communication Satisfaction with Supervisor and Supervisor Receptivity to Information were the most strongly related measures (r=.84). Likewise, Decision Participation and the Participation/Desired Participation Discrepancy were strongly, but negatively correlated at r=-.75. Salary and years of service were predictably correlated (r=.61) as were salary and age (r=.29). Job Satisfaction with supervisor was most strongly related to Communication Satisfaction with Supervisor and Supervisor Receptivity (r=.80, r=.78, respectively). Surprisingly, Supervisor Receptivity was more highly correlated with satisfaction with pay (r=.43) than was actual salary (r=.37), even though the subjects had just received a 12.5% pay increase.

While correlations among the "predictor" measures were substantial, the magnitude of relationship among the "criterion" (job satisfaction) measures reflected considerable variability. General satisfaction with work was most highly correlated with satisfaction with promotion (r=.48) and supervisor (r=.42). Satisfaction with pay was most highly associated with satisfaction with promotion (r=.41). Nevertheless, satisfaction with supervisor was correlated significantly with all other satisfaction measures; and satisfaction with pay was correlated significantly with all other satisfaction measures.

DISCUSSION AND IMPLICATIONS

This study examined the relationships of communication-related variables, participation variables, and employment variables to university classified employees' job satisfaction. Communication Satisfaction with Supervisor, perceived Supervisor Receptivity to Information, perceived Decision Participation Level, and the Participation/Desired Participation Discrepancy were found to be meaningfully related to Job Satisfaction indices. Communication Satisfaction and Supervisor Receptivity were the more important contributors to the variance shared with the job satisfaction with supervisor index and, to a lesser degree, with satisfaction with work.

In a test of the second hypothesis, the communication-related variables were divided into two competing models to determine which model shared the most variance with job satisfaction. Communication Satisfaction and Receptivity proved to be better "predictors" (76% variance) of job satisfaction than Decision Participation and Participation/Desired Participation Discrepancy (35% variance). When compared to the results of the first hypothesis, apparently no variance in job satisfaction (76%) was lost when participation variables were not included.

In another test of the second hypothesis, Communication Satisfaction with Supervisor and Supervisor Receptivity were found to be more highly related (76% variance) to job satisfaction than the employment variables of years of service, age, and salary (22% variance). Satisfaction with pay, however, was the main index of job satisfaction in this second canonical model. Although salary was correlated ($r=.37$) with satisfaction with pay, Supervisor Receptivity was correlated higher ($r=.43$).

Communication-related variables such as those included in this study were apparently powerful correlates of job satisfaction. While all of the communication variables were meaningfully related to various aspects of job satisfaction, Communication Satisfaction with Supervisor and Supervisor Receptivity appeared

to be the most important. However, as with most higher education research, the generalizability of the above results must be carefully qualified. The subjects in this study were classified non-professional employees (secretaries, clerks, lowest level supervisors, etc.) in three administrative units of one university. To the extent that these employees are comparable to others in the university, then one might be able to generalize in a qualified manner. It is highly possible that professional and administrative employees see their role in the decision-making process differently and thus, the results of this study may not be applicable to that level of employee. Likewise, since it was not possible to systematically manipulate the communication-related variables and to control observation of job satisfaction, interpretation and generalization should be constrained.

However, the results of this study cast some doubt upon the comparative value of participative decision-making as a communication strategy designed to enhance job satisfaction for non-professional university employees. It may be that such employees neither expect nor prefer participative decision-making supervision. The average (mean) response in this study indicated that employees preferred a consulting supervisory role ($\bar{x}$ = 23.34: consults=22 and joins=2?). Job satisfaction for these employees is more contingent upon the supervisor's ability to effectively communicate with employees than upon emphasizing their involvement in the decision-making process. This appears contrary to some planning philosophies which advocate the inclusion of all employee types (or at least representatives) in the planning process (Haas, 1976).

The findings of this study provide several practical suggestions for higher education management and Personnel Officers, particularly for colleges and universities who have limited monetary rewards for employees to help increase motivation, loyalty, and ultimately, productivity. (1) Some employee participation in decisions might be effective, but a consulting role appears preferable. Thus, initiating a general participation model for non-professional university

employees would not necessarily guarantee an increase in job satisfaction. (2) Supervisors should be trained (or specifically hired) to be perceived as receptive to ideas and information from subordinates. Specifically, the supervisor should be flexible in dealing with others' opinions, tolerant to differences of opinions, open-minded, encouraging of input, willing to try new ideas, willing to listen, etc. (3) Supervisors should be trained to acquire (or hired because they have) good conversational skills. For example, supervisors need to accomplish something in conversations, get to know the employee, express interest, provide support, be open, allow humor, etc. Direct application of such guidelines might enhance satisfaction with supervisor, as well as other aspects of job satisfaction.

The sample studied in this research was composed predominantly of clerical employees and further investigations need to examine personnel at other levels within the institution. Levels of decision-making such as what is to be done and how to do it could exist within the university/college. Employees at a lower level are more concerned with the how (O'Brien & Stevens, 1981) which involves communication with supervisor. Thus, the findings of this study emphasize the importance of this communication. However, administrators at higher levels may perceive their involvement to be greater in the what level of decision-making. In that case, the conclusions found in this study may not be as applicable. That question remains open for further investigation.

NOTES

[1]To examine representativeness of the sample, the Chi-Square statistic was used as a goodness-of-fit test to compare age, salary, and years of service at the institution between the sample and the surveyed population. No significant differences were found, and thus, the return sample was found to be representative.

[2]The 22 items initially included were:

1. My supervisor is cautious about accepting new ideas from me.
2. My supervisor is flexible in dealing with others' opinions.
3. My supervisor is not receptive to input from his/her subordinates.
4. My supervisor is tolerant to differences of opinion.
5. My supervisor is close-minded to information which differs from her/his opinion.
6. My supervisor frequently asks others' opinions on important university projects.
7. My supervisor frequently obtains information from others in the office
8. My supervisor encourages input from his/her subordinates.
9. My supervisor is unwilling to listen to my suggestions.
10. My supervisor would not listen to me if I went to her/him with information and/or opinions.
11. My supervisor frequently tries out new ideas.
12. My supervisor is receptive to new ideas.
13. My supervisor is rigid in dealing with others' input.
14. My supervisor never asks others' opinions on important university projects.
15. My supervisor is intolerant to differences of opinion.
16. My supervisor is suspicious of new ways of thinking.
17. My supervisor is receptive to information which differs from his/her opinion.
18. My supervisor infrequently obtains information from others in the office.
19. My supervisor is willing to listen to my suggestions.
20. My supervisor is open to my ideas on most subjects.
21. My supervisor would listen to me if I went to her/him with information and/or opinions.
22. My supervisor never tries out new ideas.

Item 18 was not used in analyses because item-total $r < .50$.

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Table 1
Canonical Correlation*
of all Predictor and Criterion Variables

Rc	Adjusted Rc	Standard Error	Variance Ratio	Rc^2
.8727	.8580	.0243	3.1933	.7615

Variables	r's with composite	Weights on composite
Comm. Satisfaction w/Supervisor	.9616	.6121
Super. Receptivity to Info.	.9561	.4003
Decision Participation Level	.6113	-.0719
Decision Participation Discrepancy	-.6224	-.1127
Satisfaction w/supervisor	.9574	.7973
Satisfaction w/co-workers	.4305	.2165
Satisfaction w/pay	.4518	.0353
Satisfaction w/promotions	.4294	.1268
Satisfaction w/work	.5700	.1264

Multivariate Statistics & F Approximations

Statistic	Value	F	DF	P<
Wilks' Lamda	.2181	8.53	20/293	.0001
Pillai's Trace	.8487	4.90	20/364	.0001
Hotelling-Lawley Trace	3.2847	14.21	20/346	.0001
Roy's Greatest Root	2.1933	58.12	5/91	.0001

*The second canonical correlation extracted was not significant, $p > .05$.

Table 2
Separate Canonical Correlations* for
Communication-with-Supervisor, Participation Variables, & Employment Variables

Rc	Adjusted Rc	Standard Error	Variance Ratio	Rc^2
.8705	.8585	.0247	3.1277	.7577

Variables	r's with composite	Weights on composite
Comm. Satisfaction w/Supervisor	.9596	.6141
Supervisor Receptivity to Info.	.9584	.4271
Satisfaction w/supervisor	.9587	.8037
Satisfaction w/co-workers	.4275	.2129
Satisfaction w/pay	.4507	.0343
Satisfaction w/promotions	.4309	.1334
Satisfaction w/work	.5635	.1146

Multivariate Statistics & F Approximations

Statistic	Value	F	DF	P<
Wilks' Lamda	.2296	19.56	10/180	.0001
Pillai's Trace	.8098	12.38	10/182	.0001
Hotelling-Lawley Trace	3.1827	28.33	10/178	.0001
Roy's Greatest Root	3.1277	56.92	5/91	.0001

Rc	Adjusted Rc	Standard Error	Variance Ratio	Rc^2
.5933	.5435	.0661	.5433	.3520

Variables	r's with composite	Weights on composite
Decision Participation Level	.9161	.4386
Decision Participation Discrepancy	-.9512	-.6287
Satisfaction w/supervisor	.9679	.8460
Satisfaction w/co-workers	.3704	.1458
Satisfaction w/pay	.4000	-.0239
Satisfaction w/promotions	.4367	.1672
Satisfaction w/work	.5612	.1126

Multivariate Statistics & F Approximations

Statistic	Value	F	DF	P<
Wilks' Lamda	.6302	4.67	10/180	.0001
Pillai's Trace	.3794	4.26	10/182	.0001
Hotelling-Lawley Trace	.5714	5.09	10/178	.0001
Roy's Greatest Root	.5433	9.89	5/91	.0001

Table 2 (continued)

Rc	Adjusted Rc	Standard Error	Variance Ratio	Rc^2
.47	.3792	.0798	.2788	.2180

Variables	r's with composite	Weights on composite
Years of Service	.5949	.3752
Age	.6370	.1898
Salary	.8651	.7582
Satisfaction w/supervisor	.1712	-.2831
Satisfaction w/co-workers	.1520	-.0908
Satisfaction w/pay	.8903	.9259
Satisfaction w/promotions	.3245	-.2282
Satisfaction w/work	.5925	.5266

Multivariate Statistics & F Approximations

Statistic	Value	F	DF	P<
Wilks' Lamda	.7557	1.75	15/246	.0421
Pillai's Trace	.2518	1.67	15/273	.0570
Hotelling-Lawley Trace	.3134	1.83	15/263	.0307
Roy's Greatest Root	.2788	5.074	5/91	.0004

*The second canonical correlations extracted for each of the above were not significant, $p > .05$.

Table 3

Correlations Among Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	1
1. Comm. Satis. w/Supervisor	1.00											
2. Super. Recept. to Info.	.84*	1.00										
3. Decision Participation Level	.59*	.58*	1.00									
4. Participation/Desired Part. (discp)	-.58*	-.60*	-.75*	1.00								
5. Age	.13	.08	.09	-.09	1.00							
6. Years of Service	.03	.07	-.10	-.03	.61*	1.00						
7. Salary	.14	.22*	.13	-.12	.29*	.14	1.00					
8. Job Sat. w/ Supervisor	.80*	.78*	.53*	-.54*	.06	-.01	.09	1.00				
9. Job Sat. w/ Co-workers	.38*	.40*	.18	-.25*	.03	.04	.07	.25*	1.00			
10. Job Sat. w/ Pay	.35*	.43*	.19	-.25*	.25*	.23*	.37*	.33*	.27*	1.00		
11. Job Sat. w/ Promotion	.36*	.36*	.24*	-.25*	.17	.18	.07	.24*	.17	.41*	1.00	
12. Job Sat. w/ Work	.51*	.43*	.27*	-.35*	.23*	.20*	.21*	.42*	.19	.34*	.48*	1.

n = 97.
*p < .05.